

## AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated hereafter.

1. (cancelled)

2 (cancelled)

3. (cancelled)

4. (cancelled)

5. (cancelled)

6. (cancelled)

7. (cancelled)

8. (currently amended)      A method for configuring a trigger sequence in a signal measurement system having a graphical user interface, and memory, the method comprising the steps of:

\_\_\_\_\_ a)      storing a plurality of protocol definition text files in memory;

\_\_\_\_\_ b)      parsing said protocol definition text files into a plurality of data structures;

\_\_\_\_\_ c)      forming a plurality of event definitions from said plurality of data structures; and

\_\_\_\_\_ d)      constructing a series of trigger primitives from said event definition

~~The method of claim 1,~~ wherein said step of ~~creating~~ constructing a logic analyzer trigger sequence from said event definition further comprises the steps of:

a1)      graphically representing selectable protocol layer icons and a protocol profile window;

b2)      displaying protocol field information corresponding to said layer of protocol information in response to graphical selection of one of said graphically

selectable protocol layer icons, wherein said protocol field information is comprised of a protocol descriptors menu and a protocol editors menu;

e3) generating a trigger sequence in response to operator input of data in said protocol editors menu.

9. (original claim) A method for configuring a trigger sequence in a signal measurement system having a graphical user interface, a software trigger mechanism and memory, the method comprising the steps of:

- a) storing a plurality of protocol definition text files in memory;
- b) parsing said protocol definition text files into a plurality of data structures;
- c) forming a plurality of event definitions from said plurality of data structures;
- d) graphically representing selectable protocol layer icons and a protocol profile window;
- e) displaying protocol field information corresponding to said layer of protocol information in response to graphical selection of one of said graphically selectable protocol layer icons, wherein said protocol field information is comprised of a least one user editable field;
- f) generating a bit sequence in response to operator input of data in at least one of said user editable fields; and
- g) constructing a series of trigger primitives from said bit sequence.

10. (original claim) The method of claim 9, wherein each of said plurality of event definitions comprises two blocks of data.

11. (original claim) The method of claim 10, wherein said two blocks of data comprise a data bit block and a “don’t care” mask block.

12. (original claim) The method of claim 11, further comprising the step of optimizing said bit sequence to identify and count multiple repetitive occurrences of identical bit patterns.

13. (original claim) The method of claim 12, wherein a single trigger primitive results from any occurrence of multiple repetitive identical bit patterns.

14. (original claim) A system for configuring a trigger sequence in a signal measurement system that acquires signal data in accordance with a trigger definition, the signal measurement system having a graphical user interface, a processor and a memory, the system comprising:

- a) a plurality of event definitions stored in the memory;
- b) an event editor, said event editor comprising a plurality of graphically selectable protocol layer icons and a protocol profile window corresponding to said protocol layer icons, wherein said protocol profile window comprises at least one editable menu and wherein user entries in at least one of said editable menu causes said processor to translate said event definitions into a bit sequence.

15. (original claim) The system of claim 14, wherein a series of trigger primitives is constructed from said bit sequence.

16. (original claim) The system of claim 15, wherein said bit sequence comprises a series of bit patterns.

17. (original claim) The system of claim 16, further comprising an optimization routine which identifies and counts occurrences of multiple repetitive bit patterns in said bit sequence.

18. (original claim) The system of claim 17, wherein a single trigger primitive is constructed from any occurrence of multiple repetitive bit patterns.

19. (original claim) The system of claim 18, wherein said event definitions comprise two blocks of data.
20. (original claim) The system of claim 19, wherein said two blocks of data comprise a data bit block and a don't care mask block.
21. (original claim) The system of claim 14, wherein said graphically selectable protocol layer icons represent layers of protocol information accessed over communications data buses with said signal measurement system.
22. (original claim) The system of claim 14, wherein said protocol profile window further comprises a descriptor menu graphically associated with said at least one editable menu.
23. (cancelled)
24. (cancelled)
25. (cancelled)
26. (currently amended) A method for configuring a trigger sequence in a signal measurement system having a graphical user interface, and memory, the method comprising the steps of:
- a) storing a plurality of protocol definition text files in memory;
  - b) parsing said protocol definition text files into a plurality of data structures, wherein each of said data structures comprises protocol information including at least a field name, a field size, a field type and a favorite data format for display;
  - c) forming a plurality of event definitions from said plurality of data structures; and

d) constructing a bit sequence from said event definition. ~~The method of claim 23, wherein said step of creating said logic analyzer trigger~~ bit sequence from said event definition comprises the steps of:

~~—~~ a<sub>1</sub>) graphically representing selectable protocol layer icons and a protocol profile window;

~~—~~ b<sub>2</sub>) displaying protocol field information corresponding to said layer of protocol information in response to graphical selection of one of said graphically selectable protocol layer icons, wherein said protocol field information is comprised of a protocol descriptors menu and a protocol editors menu; and

~~—~~ e<sub>3</sub>) generating a series of trigger primitives in response to operator input of data in said protocol editors menu.;

e) optimizing said bit sequence to identify and count multiple consecutive occurrences of identical bit patterns; and

f) constructing a series of trigger primitives from said bit sequence, wherein any identification of multiple consecutive occurrences of identical bit patterns by said optimizing results in a single trigger primitive for said multiple occurrence.